UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/694,599	10/23/2000	Timothy Roy Block	IBM / 168	8927

7590   06/09/2004

Scott A. Stinebruner
Wood, Herron & Evans, L.L.P.
2700 Carew Tower
441 Vine Street
Cincinnati, OH 45202-2917

EXAMINER
BRUCKART, BENJAMIN R

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 May 2004</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>7,8,16 and 17</u> is/are allowed.

6)☒ Claim(s) <u>1-6,9-15 and 18-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Detailed Action

Claims 1-20 are pending in this Office Action.

Claims 1-6, 9-15, 18-20 are rejected under 35 U.S.C. 103(a) as being anticipated by U.S.
Patent No 6,108,699 by Moiin in view of U.S. Patent No 6,119,163 by Monteiro et al.

Claim 1-5, 9-15, 18-20 are provisionally rejected under the judicially created doctrine of
double patenting over claims 7 and 26 of copending Application No. 09/694,586 herein referred
to as "586" in view of U.S. Patent No. 6,108,699 by Moiin in further view of U.S. Patent No.
6,119,163 by Monteiro et al.

Specification

The attempt to incorporate subject matter into this application by reference to "the cross
related application" is improper because it is blank in the specification, page 1, first paragraph.
The line "_____" should be replaced with the application number of the co-pending
application.

Allowable Subject Matter

Claims 7-8 and 16 and 17 are allowed.

Response to Arguments

Applicant's arguments with respect to claims 1-6, 9-15, 18-20 have been considered but
are moot in view of the new ground(s) of rejection.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 9 is provisionally rejected under the judicially created doctrine of double patenting over claims 7 and 26 of copending Application No. 09/694,586 herein referred to as "586" in view of U.S. Patent No. 6,108,699 by Moiin in further view of U.S. Patent No. 6,119,163 by Monteiro et al. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

Regarding claim 9, an apparatus, comprising:

(a) a memory (586: claim 7a, 26a); and

(b) a program resident in the memory (586: claim 7b, 26b), the program configured to dynamically modify a fragmentation size cluster communication parameter in a clustered computer system by processing a requested fragmentation size change only after receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (586: claim 7b, 26b).

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify a communication parameter as taught by application 586 modifying fragmentation size (Monteiro: col. 7, lines 7-20) as taught by Monteiro in order to accommodate changes in network conditions and while using a threads as taught by Moiin in order to allow for regulate and simplify the sending and receiving of messages (Moiin: col. 14, lines 26-29).

Claims 1-5, 10-14, 18-20 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the similarities and point to the teachings of 586.

Regarding claim 1, the two applications have preambles that share a method of dynamically modifying a cluster communication parameter in a clustered computer system. Claim 1(a) shares deferring action until receipt of acknowledged message with claim 19(b) and 24 of 586. Claim 1(b) shares with claim 1(c) of 586 "modifying cluster communication parameter."

Regarding claim 2, the method of claim 1, further comprising sending a sync message from the source node to the plurality of target nodes (586: claims 20, 1a), wherein deferring processing of the requested fragmentation size change includes waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (586: claims 1c, 22, 19).

Regarding claim 3, the method of claim 2, wherein the sync message is configured to initiate, upon receipt by each target node, an immediate acknowledgment message from such target node that acknowledges receipt for each unacknowledged message received by such target node (586: claims 1b, 22).

Regarding claim 4, the method of claim 2, wherein processing the requested fragmentation size change includes sending a fragmentation size change message from the source node to the plurality of target nodes (586: claims 1a, 3, 6), the fragmentation size change message configured to modify the fragmentation size cluster communication parameter on each of the plurality of target nodes (586: claim 1c).

Regarding claim 5, the method of claim 4, wherein processing the requested fragmentation size change further includes modifying the fragmentation size cluster communication parameter on the source node (586: claim 19, 1a).

Regarding claim 10, the apparatus of claim 9, wherein the program is further configured to process the requested fragmentation size change after receipt of the acknowledgment message to modify a fragmentation size cluster communication parameter used in transmitting messages from the source node to the plurality of target nodes (586: claim 1a 1c), and wherein the program is further configured to thereafter send messages from the source node to the plurality of target nodes using the modified fragmentation size cluster communication parameter.

Regarding claim 11, the apparatus of claim 10, wherein the program is further configured to send a sync message from the source node to the plurality of target nodes (586: claims 20, 1a) such that deferring processing of the requested fragmentation size change includes waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (586: claims 1c, 22, 19).

Regarding claim 12, the apparatus of claim 11, wherein the sync message is configured to initiate, upon receipt by each target node, an immediate acknowledgment message from such target node that acknowledges receipt for each unacknowledged message received by such target node (586: claims 1b, 22).

Regarding claim 13, the apparatus of claim 11, wherein the program is configured to process the requested fragmentation size change by sending a fragmentation size change message from the source node to the plurality of target nodes (586: claim 1a), the fragmentation size change message configured to modify the fragmentation size cluster communication parameter on each of the plurality of target nodes (586: claim 1c).

Regarding claim 14, the apparatus of claim 13, wherein the program is further configured to process the requested fragmentation size change by modifying the fragmentation size cluster communication parameter on the source node (586: claim 19, 1a).

Regarding claim 18, a clustered computer system, comprising:

(a) a plurality of nodes coupled to one another over a network, the plurality of nodes including a source node and a plurality of target nodes (586: claim 12a);

(b) a source program resident on the source node, the source program configured to dynamically modify a fragmentation size cluster communication parameter in a clustered computer system by sending a sync message to the plurality of target nodes (586: 12b, 26a and b), thereafter waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (586: claim 26b), thereafter sending a fragmentation size change message to each of the plurality of target nodes to modify a fragmentation size cluster communication parameter on such target nodes used in transmitting messages from the source node to the target nodes (586: claim 1a); and

(c) a target program resident on each of the plurality of target nodes, the target program configured to send an acknowledgment message to the source node in response (586: claim 7a, 7b, 20, 22), to the sync message to acknowledge receipt for each unacknowledged message received thereby, and to modify a fragmentation size cluster communication parameter associated therewith in response to the fragmentation size change message (586: claim 1, 20, 22).

Regarding claim 19, a program product (586: claim 13), comprising:

(a) a program configured to dynamically modify a fragmentation size cluster communication parameter in a clustered computer system by processing a requested fragmentation size change only after receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (586: claim 13a); and

(b) a signal bearing medium bearing the program (586: claim13b).

Regarding claim 20, the program product of claim 19, wherein the signal bearing medium includes at least one of a transmission medium and a recordable medium (586: claim 14).

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claims 1-6, 9-15, 18-20 are rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Patent No 6,108,699 by Moiin in view of U.S. Patent No 6,119,163 by Monteiro et al.

Regarding claim 1,

The Moiin reference teaches a method of dynamically modifying a cluster communication parameter in a clustered computer system (Moiin: col. 2, lines 10-20; col. 14, lines 2-15; col. 5, lines 56-61; cluster size), the method comprising:

(a) deferring processing of a requested change until receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (Moiin: col. 2, lines 29-34);

(b) thereafter processing the requested fragmentation size change to modify a cluster communication parameter used in transmitting messages from the source node to the plurality of target nodes (Moiin: col. 2, lines 34-38, 44-50); and

(c) thereafter sending messages from the source node to the plurality of target nodes using the modified cluster communication parameter (Moiin: col. 2, lines 34-38, 16-20; col. 7, lines 53-61; col. 8, lines 38-51).

The Moiin reference does not explicitly disclose a fragmentation size.

The Monteiro reference teaches modify fragmentation size (Monteiro: col. 7, lines 7-20).

The Monteiro reference further teaches modifying fragmentation size adapts to changes in network conditions to reduce packet loss (Montiero: col. 7, lines 7-37).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of dynamically modifying a cluster communication parameter as taught by Moiin while modifying the packet size as taught by Monteiro in order to adjust to network conditions and reduce packet loss (Montiero: col. 7, lines 7-37).

Claims 2-4 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Monteiro et al and Moiin.

Regarding claim 2, the method of claim 1, further comprising sending a sync message from the source node to the plurality of target nodes (Moiin: col. 2, lines 16-20), wherein deferring processing of the requested fragmentation size change includes waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (Moiin: col. 2, lines 29-33).

Regarding claim 3, the method of claim 2, wherein the sync message is configured to initiate, upon receipt by each target node, an immediate acknowledgment message from such target node that acknowledges receipt for each unacknowledged message received by such target node (Moiin: col. 2, lines 44-50).

Regarding claim 4, the method of claim 2, wherein processing the requested fragmentation size change includes sending a fragmentation size change message from the source node to the plurality of target nodes (Moiin: col. 2, lines 16-20; petitioning node to petitioned nodes), the fragmentation size change message configured to modify the fragmentation size cluster communication parameter on each of the plurality of target nodes (Moiin: col. 2, lines 44-50).

Regarding claim 5, the method of claim 4, wherein processing the requested fragmentation size change further includes modifying the fragmentation size cluster communication parameter on the source node (Moiin: col. 7, lines 53-61).

Regarding claim 6, the method of claim 4, wherein the source node comprises a message queue (Moiin: col. 13, lines 60- col. 14, line 7; sender and receiver threads), and wherein sending the sync message includes placing the sync message on the message queue and sending the fragmentation size change message includes placing the fragmentation size change message on the message queue (Moiin: col. 13, lines 60- col. 14, line 7; message to be broadcast in sending thread).

Regarding claim 9,

The Moiin reference teaches an apparatus (Moiin: col. 4, lines 25-32), comprising:

(a) a memory (Moiin: col. 4, lines 26); and

(b) a program resident in the memory (Moiin: col. 4, lines 15-18), the program configured to dynamically modify a cluster communication parameter in a clustered computer system (Moiin: col. 2, lines 16-20; col. 14, lines 2-15) by processing a requested change only after receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (Moiin: col. 2, lines 29-34, lines 44-50).

The Moiin reference does not explicitly disclose a fragmentation size.

The Monteiro reference teaches modify fragmentation size (Monteiro: col. 7, lines 7-20).

The Monteiro reference further teaches modifying fragmentation size adapts to changes in network conditions to reduce packet loss (Montiero: col. 7, lines 7-37).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of dynamically modifying a cluster communication parameter as taught by Moiin while modifying the packet size as taught by Monteiro in order to adjust to network conditions and reduce packet loss (Montiero: col. 7, lines 7-37).

Claims 9-14 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Monteiro et al and Moiin.

Regarding claim 10, the apparatus of claim 9, wherein the program is further configured to process the requested fragmentation size change after receipt of the acknowledgment message to modify a fragmentation size cluster communication parameter used in transmitting messages

from the source node to the plurality of target nodes (Moiin: col. 2, lines 44-50; col. 2, lines 32-34; Figure 4, tag 406), and wherein the program is further configured to thereafter send messages from the source node to the plurality of target nodes using the modified fragmentation size cluster communication parameter (Moiin: col. 2, lines 34-38, 16-20; col. 7, lines 53-61; col. 8, lines 38-51).

Regarding claim 11, the apparatus of claim 10, wherein the program is further configured to send a sync message from the source node to the plurality of target nodes such that deferring processing of the requested fragmentation size change includes waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (Moiin: col. 2, lines 29-34, 44-50).

Regarding claim 12, the apparatus of claim 11, wherein the sync message is configured to initiate, upon receipt by each target node, an immediate acknowledgment message from such target node that acknowledges receipt for each unacknowledged message received by such target node (Moiin: col. 2, lines 44-50).

Regarding claim 13, the apparatus of claim 11, wherein the program is configured to process the requested fragmentation size change by sending a fragmentation size change message from the source node to the plurality of target nodes (Moiin: col. , lines), the fragmentation size change message configured to modify the fragmentation size cluster communication parameter on each of the plurality of target nodes (Moiin: col. , lines).

Regarding claim 14, the apparatus of claim 13, wherein the program is further configured to process the requested fragmentation size change by modifying the fragmentation size cluster communication parameter on the source node (Moiin: col. 7, lines 53-61).

Regarding claim 15, the apparatus of claim 13, further comprising a message queue resident on the source node (Moiin: col. 13, lines 60- col. 14, line 7; sender and receiver threads), wherein the program is configured to send the sync message and the fragmentation size change

message by placing the sync message and the fragmentation size change message on the message
queue (Moiin: col. 13, lines 60- col. 14, line 7; message to be broadcast in sending thread).

Regarding claim 18,

The Moiin reference a clustered computer system, comprising:

(a) a plurality of nodes coupled to one another over a network, the plurality of nodes
including a source node and a plurality of target nodes (Moiin: col. 3, lines 64- col. 4, line 1;
Figure 1);

(b) a source program resident on the source node (Moiin: col. 4, lines 15-18), the source
program configured to dynamically modify a cluster communication parameter in a clustered
computer system by sending a sync message to the plurality of target nodes (Moiin: col. 2, lines
16-20; col. 14, lines 2-15), thereafter waiting for an acknowledgment message for the sync
message from each of the plurality of target nodes (Moiin: col. 2, lines 29-34, 44-50), thereafter
sending a change message to each of the plurality of target nodes to modify a cluster
communication parameter on such target nodes used in transmitting messages from the source
node to the target nodes (Moiin: col. 2, lines 29-38); and

(c) a target program resident on each of the plurality of target nodes (Moiin: col. 4, lines
15-18), the target program configured to send an acknowledgment message to the source node in
response (Moiin: col. 2, lines 44-50), to the sync message to acknowledge receipt for each
unacknowledged message received thereby, and to modify a cluster communication parameter
associated therewith in response to the change message (Moiin: col. 2, lines 39-40).

The Moiin reference does not explicitly disclose a fragmentation size.

The Monteiro reference teaches modify fragmentation size (Monteiro: col. 7, lines 7-20).

The Monteiro reference further teaches modifying fragmentation size adapts to changes
in network conditions to reduce packet loss (Montiero: col. 7, lines 7-37).

Therefore it would have been obvious at the time of the invention to one of ordinary skill
in the art to create the system of dynamically modifying a cluster communication parameter as
taught by Moiin while modifying the packet size as taught by Monteiro in order to adjust to
network conditions and reduce packet loss (Montiero: col. 7, lines 7-37).

Regarding claim 19,

The Moiin reference teaches a program product (Moiin: col. 4, lines 25-32), comprising:

(a) a program configured to dynamically modify a cluster communication parameter in a clustered computer system (Moiin: col. 2, lines 16-20; col. 14, lines 2-15) by processing a requested change only after receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (Moiin: col. 2, lines 29-34, 44-50); and

(b) a signal bearing medium bearing the program (Moiin: col. 4, lines 58-66).

The Moiin reference does not explicitly disclose a fragmentation size.

The Monteiro reference teaches modify fragmentation size (Monteiro: col. 7, lines 7-20).

The Monteiro reference further teaches modifying fragmentation size adapts to changes in network conditions to reduce packet loss (Montiero: col. 7, lines 7-37).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of dynamically modifying a cluster communication parameter as taught by Moiin while modifying the packet size as taught by Monteiro in order to adjust to network conditions and reduce packet loss (Montiero: col. 7, lines 7-37).

Claim 20 is rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Monteiro et al and Moiin.

Regarding claim 20, the program product of claim 19, wherein the signal bearing medium includes at least one of a transmission medium and a recordable medium (Moiin: col. 5, lines 9-19; col. 4, lines 28-32).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Benjamin R Bruckart whose telephone number is (703) 305-

0324. The examiner can normally be reached on 8:00-5:30 PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hosain Alam can be reached on (703) 308-6662. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 872-9306 for regular

communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-0324.

Benjamin R Bruckart
Examiner
Art Unit 2155
brb
June 7, 2004

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER